

WHAT IS CLAIMED IS:

1. A coded picture data reproducing apparatus for reproducing a coded picture data which is coded from a picture signal comprised of several frames corresponding to pictures to be reproduced in the specific reproducing sequence based on the predictive coding system, and which is comprised of several groups of data which consists of an intraframe coded picture data, an interframe forward predictive coded picture data and bi-directional predictive coded picture data, comprising:
  - a data fetcher for fetching the coded picture data;
  - a decoder for decoding the picture data corresponding to each frame of the coded picture data;
  - a memory for storing an interframe forward predictive coded picture data corresponding to the frame which will be reproduced last within the picture data group among the decoded picture data decoded by the decoder;
  - a start-frame designator for designating a start-frame among the frames mentioned above;
  - an end-frame designator for designating an end-frame among the frames mentioned above;
  - a memory controller for controlling the memory to store the interframe forward predictive coded picture data corresponding to the frame which will be reproduced last of the picture data group that is reproduced just before the picture data group where the picture data corresponding to the start-frame belongs when the

**start-frame** is designated by the **start-frame** designator;

a data fetcher controller for controlling the data fetcher to fetch the picture data of the picture data group where the picture data corresponding to the start-frame belongs when the end-frame is

- 5 designated by the end-frame designator;

a memory controller for controlling the memory to yield the interframe forward predictive coded picture data; and

a decoder controller for controlling the decoder to decode the bi-directional predictive coded picture data corresponding to the

- 10 frame which is reproduced between the frame corresponding to the interframe forward predictive coded picture data output from the memory and the frame corresponding to the intraframe coded picture data in the picture data group where the start-frame belongs by using the interframe forward predictive coded picture data and the

15 intraframe coded picture data, further controlling to decode the picture data corresponding to the frames up to the end-frame, and wherein, the pictures corresponding to the respective frames from the start-frame to the end-frame are repetitively reproduced.

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**2. A coded picture data reproducing apparatus as claimed in claim 1, wherein**

the picture data group contains a control data which shows whether the entire picture data in the picture data group could be decoded without the interframe forward predictive coded picture data of other picture data group or not; and

the coded picture data reproducing apparatus comprises a judging means for judging if it uses the interframe forward predictive coded picture data or not when decoding the picture data of the picture data group based on the control data.

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3. A coded picture data reproducing apparatus as claimed in claim 1, wherein

a converter for converting the decoded picture data into the analog video signal; and

10 a video signal output terminal for outputting the video signal, which is able to be coupled to the picture display device.

4. A coded picture data reproducing apparatus as claimed in claim 1,

15 further comprising an output terminal for outputting the decoded picture data as a digital video signal.

5. A coded picture data reproducing apparatus for reproducing a coded picture data which is coded from a picture signal comprised of 20 several frames corresponding to pictures to be reproduced in the specific reproducing sequence based on the predictive coding system, and which is comprised of several groups of data which consists of an intraframe coded picture data, an interframe forward predictive coded picture data and bi-directional predictive coded picture data, 25 comprising:

a data fetcher for fetching the coded picture data;

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- a decoder for decoding the picture data corresponding to each frame of the coded picture data;
  - a memory for storing the bi-directional predictive coded picture data corresponding to a frame which is reproduced in preceding a frame of the intraframe coded picture data in the group of picture among the picture data decoded in the decoder;
  - 5 a start-frame designator for designating a start-frame among the aforesaid frames;
  - an end-frame designator for designating an end-frame among 10 the aforesaid frames;
  - a memory controller for controlling the memory to store the bi-directional predictive coded picture data corresponding to a frame reproduced in preceding a frame of the intraframe coded picture data in a picture data group wherein a picture data of a start-frame 15 belongs when the start-frame is designated by the start-frame designator;
  - 15 a data fetcher controller for controlling the data fetcher to fetch the picture data of the picture data group where the picture data corresponding to the start-frame belongs when the end-frame is 20 designated by the end-frame designator;
  - a memory controller for controlling the memory to yield the bi-directional predictive coded picture data; and
  - a decoder controller for controlling the decoder to decode picture data following the bi-directional predictive coded picture output from 25 the memory up to the end-frame,
  - and wherein, the pictures corresponding to the respective

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frames from the start-frame to the end-frame are repetitively reproduced.

6. A coded picture data reproducing apparatus as claimed in  
5 claim 5, further comprising:

a converter for converting the decoded picture data into the analog video signal; and

a video signal output terminal for outputting the video signal, which is able to be coupled to the picture display device.

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7. A coded picture data reproducing apparatus as claimed in  
claim 7, further comprising:

an output terminal for outputting the decoded picture data as a digital video signal.

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8. A coded picture data reproducing apparatus for reproducing a coded picture data which is coded from a picture signal comprised of several frames corresponding to pictures to be reproduced in the specific reproducing sequence based on the predictive coding system,  
20 and which is comprised of several groups of data which consists of an intraframe coded picture data, an interframe forward predictive coded picture data and bi-directional predictive coded picture data, comprising:

25 a data fetcher for fetching the coded picture data;

a decoder for decoding the picture data corresponding to each frame of the coded picture data;

- a data group address memory for storing the address data so as to search for the picture data group;
  - a start-frame designator for designating a start-frame among the aforesaid frames;
  - 5 an end-frame designator for designating an end-frame among the aforesaid frames;
  - a memory controller for controlling the data group address memory to memorize address data for searching picture data of the picture data group which is reproduced just before the picture data group wherein the picture data of the start-frame belongs when the start-frame is designated by the start-frame designator;
  - 10 a data fetcher controller for controlling the data fetcher to obtain picture data of a picture data group which is reproduced just before the picture data group wherein picture data of a start-frame belong based on the address data stored in the data group address memory when the end-frame is designated by the end-frame designator; and
  - 15 a decoder controller for controlling the decoder to decode the bi-directional predictive coded picture data corresponding to the frame which is reproduced between the frame corresponding to the interframe forward predictive coded picture data output from the memory and the frame corresponding to the intraframe coded picture data in the picture data group where the start-frame belongs by using the interframe forward predictive coded picture data and the intraframe coded picture data, further controlling the decoder to decode the picture data up to the end-frame.
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and wherein, the pictures corresponding to the respective frames from the start-frame to the end-frame are repetitively reproduced.

- 5        9. A coded picture data reproducing apparatus as claimed in claim 8, further comprising:

          a picture data generator for generating the picture data corresponding to the start-frame and the end-frame and the picture data corresponding to the frame of the picture reproduced between the start-frame and the end-frame among the decoded picture data.

- 10      10. A coded picture data reproducing apparatus as claimed in claim 8, further comprising:

          a picture data generator for generating the picture data corresponding to the picture of the frame reproduced from the start-frame to the end-frame among the decoded picture data;  
          a converter for converting the picture data output from the picture data generator into an analog video signal; and  
          a video signal output terminal for outputting the video signal,  
20      which is able to be coupled to the picture display device,  
          and wherein, the pictures corresponding to the respective frames from the start-frame to the end-frame are repetitively reproduced.

- 25      11. A coded picture data reproducing apparatus as claimed in claim 8, further comprising:

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- a picture group address memory for storing address data for searching the picture data in the picture data group which are reproduced just before the picture data group at decoding time;
  - a memory controller for controlling the data group address
  - 5 memory to store the address data for searching the picture data in the picture data group which are reproduced just before the picture data group wherein picture data of a start-frame belong when the start-frame is designated by the start-frame designator;
  - a data fetcher controller for controlling the data fetcher to
  - 10 obtain picture data in the picture data group reproduced just before the picture data group wherein the picture data of a start-frame belong based on the address data stored in the data group address memory when an end-frame is designated by the end-frame designator; and
  - 15 a decoder controller for controlling the decoder to decode the picture data belonging to a picture data group reproduced just before the picture data group wherein the picture data of a start-frame belongs, to decode the bi-directional predictive coded picture data corresponding to a frame reproduced between the interframe forward
  - 20 predictive coded picture data corresponding to a frame reproduced last in the picture data group and the intraframe coded picture data in the picture data group wherein the start-frame belongs by using the interframe forward predictive coded picture data and the intraframe coded picture data, and to decode picture data up to the
  - 25 end-frame,
- and wherein, the pictures corresponding to the respective

**frames from the start-frame to the end-frame are repetitively  
reproduced.**